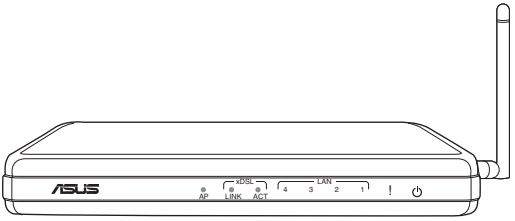
11g WiFi ADSL Router

WL-AM604g



User Manual

E3654 / March 2008

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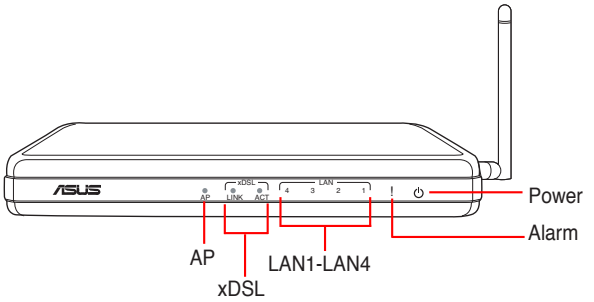
Package contents

- WL-AM604g 11g WiFi ADSL Router
- AC power adapter (type varies by region)
- Category 5 (CAT5) Ethernet cable
- Telephone cable
- Splitter (type varies by region)
- Support CD (with User Guide included)
- Quick Start Guide

Hardware overview

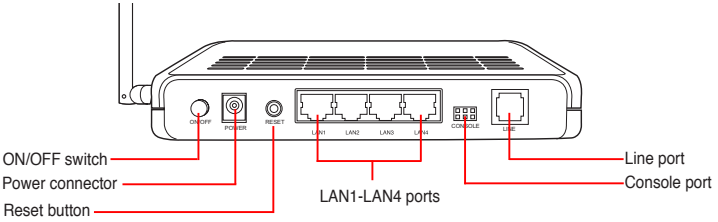
Front panel

The WL-AM604g 11g WiFi ADSL Router front panel contains LED indicators which shows the status of WL-AM604g.



LED	Activity	Description
AP	Solid	Wireless is enabled.
	No light	Wireless is disabled.
	Blinking	There is wireless traffic.
xDSL link	Solid	ADSL is connected.
	No light	ADSL is not connected. The alarm LED will be red.
	Blinking	The router is connected to ADSL.
xDSL ACT	Solid	ADSL is connected, and there is no ADSL traffic.
	No light	ADSL is not connected.
	Quick blinking	There is ADSL traffic.
LAN1-LAN4	Solid	Router is connected to the LAN.
	No light	No connection to the LAN. Check if the LAN cable is connected to the router.
	Blinking	LAN traffic
! (Alarm)	Solid (red)	ADSL is not connected.
	No light	ADSL is connected.
⏻ (Power)	Solid	Router is powered on
	No light	Router is not turned ON. Check if the router is plugged in and if the power switch is turned ON.

Rear panel



Label	Description
ON/OFF	Press to turn the router on and off.
POWER	Connects to a 15 VAC AC power adapter.
RESET	Restart—Using a pointed object such as a ballpen, press the button for less than four seconds. Default settings— Using a pointed object such as a ballpen, press the button for four seconds or longer.
LAN1-LAN4	RJ-45 connects the unit to an Ethernet device such as a PC or a switch.
CONSOLE	NOTE: To be used by maintenance professionals only. If the router needs repair, bring it to a service professional.
Line	RJ-11 cable connects to the splitter provided.

Product features

The WL-AM604g 11g WiFi ADSL Router provides the following features:

- Built-in ADSL modem
- Built-in firewall
- IEEE802.11g standard-based wireless network, backward compatible with 802.11b devices
- Easy-to-use Web-based configuration interface: Quick Setup for ADSL connection, wireless, and security configuration
- Extensive routing protocol support: RIP v1, v2
- Content-based filter

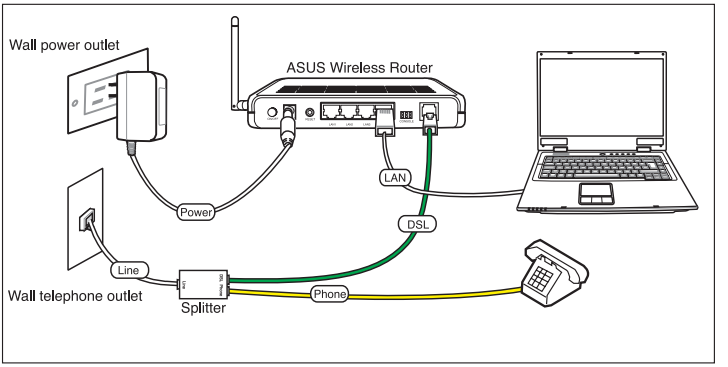
Hardware connections

ADSL connection

Use the ADSL splitter supplied in the package to split ADSL signal and telephone service. Connect your ASUS WL-AM604g 11g WiFi ADSL Router to the DSL port of the splitter with the telephone cable supplied in the package. Use another telephone cable to connect your telephone to the Phone port of the ADSL splitter.

Ethernet connection

Use Category 5 (CAT5) Ethernet cable to build up your wired LAN connections. The ASUS WL-AM604g 11g WiFi ADSL Router is a Fast Ethernet device that provides 100Mbps network connection. To ensure the connection quality, use CAT5 Ethernet cable to connect your network devices, such as desktop computers and network printers.



Wireless connection

To access Internet via wireless connection, you need to install an IEEE802.11b/g wireless adapter on your computer, such as ASUS WL-167g, WL-100gE, WL-100gD, WL-169gE, and WL-106gM.

Connecting to the Internet

Before you proceed

Before proceeding, you need to:

- Ensure the cable connections are correct and WL-AM604g is powered ON; and
- Acquire an active Internet service, such as an ADSL account.

We recommend using wired connection for initial configuration, which may help avoid possible setup problems due to wireless uncertainty. Use a CAT5 cable to connect an Ethernet-enabled computer to a LAN port of WL-AM604g.

Preparing your WAN

Based on the requirements of your Internet Service Provider (ISP), ensure that you have the following information for setting up the Internet connection on your WL-AM604g:

- Virtual Path Identifier (VPI)
- Virtual Channel Identifier (VCI)
- Host name
- Domain name
- ISP login user name and password
- ISP Domain Name System (DNS) server address
- Static IP address

Preparing your LAN

To use WL-AM604g on your network, you need to install a network interface card (NIC) or an IEEE802.11b/g wireless network card to your computer.

LAN configuration requirement

For the initial configuration, we recommend that you connect a computer to one of the LAN port of WL-AM604g and configure the TCP/IP settings of your computer. The default IP settings of WL-AM604g are:

IP address: 192.168.1.1

Subnet mask: 255.255.255.0

DHCP server: enabled

To access WL-AM604g, you must set your computer in the same subnet with the ADSL router. You can set the computer to accept a dynamic IP address assigned by the DHCP server of WL-AM604g, or manually set up an IP address for your computer.

Getting dynamic IP address

Open **Control Panel** -> **Local Area Network Connection**, double-click **Local Connection** icon, then double-click **Internet Protocol (TCP/IP).** Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**, then click **OK.**

Assigning IP address manually

Open **Control Panel** -> **Local Area Network Connection**, double-click **Local Connection** icon, then double-click **Internet Protocol (TCP/IP)**. Follow the descriptions below to set up the TCP/IP on your computer.

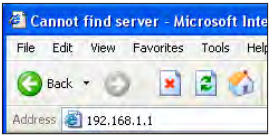
- **IP address:** 192.168.1.xxx (xxx can be any number between 2 and 254, make sure the IP address is not used by other device)
- **Subnet Mask:** 255.255.255.0
- **Gateway:** 192.168.1.1
- **DNS:** 192.168.1.1

Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

Login to the Web configuration interface

To change the ADSL and wireless settings, you need to login to the Web configuration interface.

1. Key in 192.168.1.1 (default IP address of WL-AM604g) into the address box of the Web browser and press **Enter**.



2. A login window appears. The default username is **admin,** password is **admin** (in lower case).

3. When logged in, you can see the home page of WL-AM604g Web configuration interface. To set up the router, refer to Quick Setup in the next section. To set up the advanced functions, refer to the next chapters for detailed information.

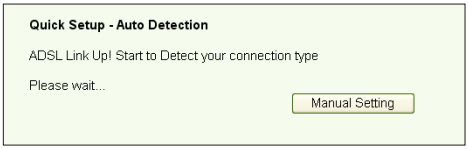
Quick setup

Login to the WL-AM604g configuration page

1. Key in **192.168.1.1** in the address box of your web browser and press Enter.
2. A login window appears for the username and password. The default username is **admin**, password is **admin** (in lower case).
3. After logging in, you can see the WL-AM604g configuration page.

ADSL setup

1. By default, the **Quick Setup** page pops up. The Quick Setup Wizard automatically detects your ADSL connection type.



2. If ADSL connection is detected, the next page shows your ISP connection type.

If your ADSL connection is not detected, click **Manual Setting** to manually set up WL-AM604g. Refer to pages 11-14 for manual setting instructions.

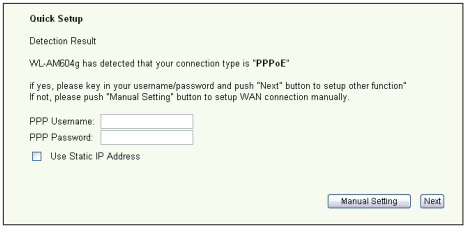
*** If your connection type is PPPoE or PPPoA**

For dynamic IP users

Key in your user name and password then click **Next**.

For static IP users

Check **Use Static IP Address**, key in your IP address, then click **Next**.

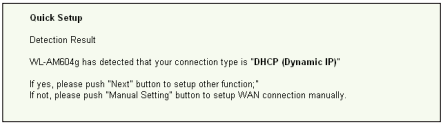

Quick Setup
Detection Result
WL-AM604g has detected that your connection type is "PPPoE"
if yes, please key in your username/password and push "Next" button to setup other function"
If not, please push "Manual Setting" button to setup WAN connection manually.
PPP Username:
PPP Password:
Use Static IP Address
Manual Setting
Next

If your actual connection is not PPPoE or PPPoA, click **Manual Setting** to manually set up WL-AM604g. Refer to pages 11-14 for manual setting instructions.

*** If your connection type is MER (DHCP)**

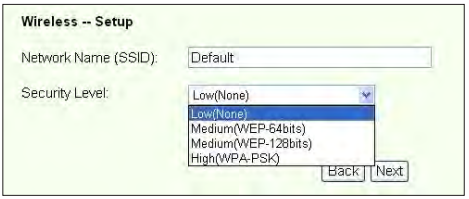
Click **Next** if your connection type is MER (DHCP).

If your actual connection is not MER(DHCP), click **Manual Setting** to manually set up WL-AM604g. Refer to pages 11-14 for manual setting instructions.


Quick Setup
Detection Result
WL-AM604g has detected that your connection type is "DHCP (Dynamic IP)"
If yes, please push "Next" button to setup other function;*
If not, please push "Manual Setting" button to setup WAN connection manually.

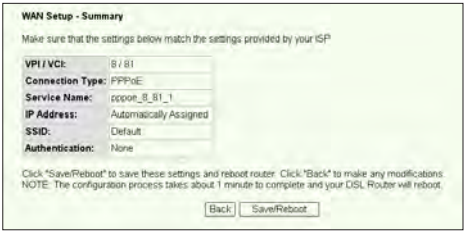
Wireless setup

1. Choose a **Security Level**. For detailed security information, refer to pages 17-18.



2. Enter a key in the **Key** field. The number of digit for the key depends on the security level you choose.

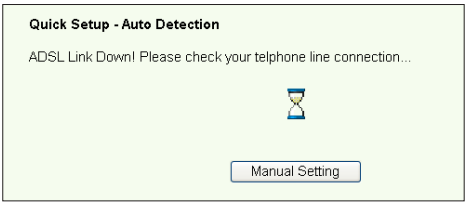
3. The summary page is displayed. If the information displayed is correct, click **Save/Reboot** to finish the setup. Otherwise, click **Back** to modify the settings.


WAN Setup - Summary
Make sure that the settings below match the settings provided by your ISP
VPI / VCI: 8 / 81
Connection Type: PPPoE
Service Name: pppoe_8_81_1
IP Address: Automatically Assigned
SSID: Default
Authentication: None
Click "Save/Reboot" to save these settings and reboot router. Click "Back" to make any modifications.
NOTE: The configuration process takes about 1 minute to complete and your DSL Router will reboot.
Back
Save/Reboot

The system reboots in 60 seconds. The web page automatically refreshes to display the device information.

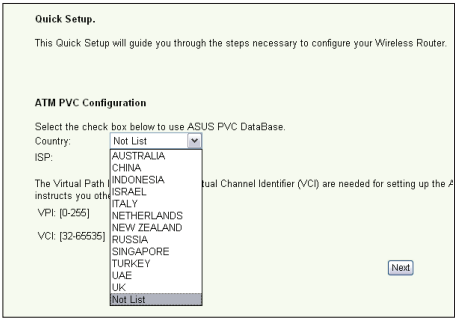
Manual Setup

If you encounter difficulty when configuring your ADSL connection with Quick Setup, click **Manual Setting** to manually set up your WL-AM604g.

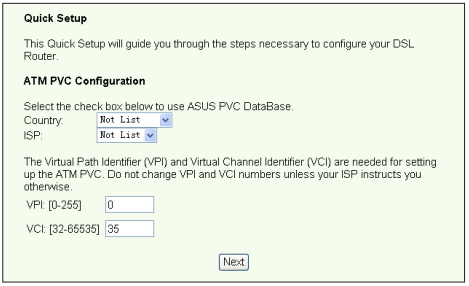


ADSL Setup

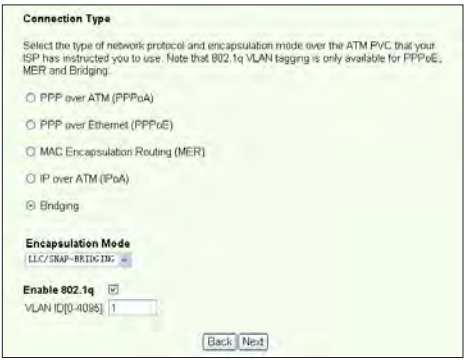
1. Select your **Country** and **ISP** and click **Next**.



2. If your country and ISP are not on the list, select **Not list**, key in your VPI and VCI values and click **Next**. You may ask your ISP for VPI/VCI values.


Quick Setup
This Quick Setup will guide you through the steps necessary to configure your DSL Router.
ATM PVC Configuration
Select the check box below to use ASUS PVC DataBase.
Country: Not List
ISP: Not List
The Virtual Path Identifier (VPI) and Virtual Channel Identifier (VCI) are needed for setting up the ATM PVC. Do not change VPI and VCI numbers unless your ISP instructs you otherwise.
VPI: [0-255] 0
VCI: [32-65535] 35
Next

3. Select your connection type and click **Next**. You can get the connection type from your ISP.


Connection Type
Select the type of network protocol and encapsulation mode over the ATM PVC that your ISP has instructed you to use. Note that 802.1q VLAN tagging is only available for PPPoE, MER and Bridging.
PPP over ATM (PPPoA)
PPP over Ethernet (PPPoE)
MAC Encapsulation Routing (MER)
IP over ATM (IPoA)
Bridging
Encapsulation Mode
LLC/SNAP-BRIDGING
Enable 802.1q
VLAN ID[0-4095]: 1
Back
Next

*** If your connection type is PPPoA or PPPoE**

For dynamic IP users

Key in your PPP username, password, and service name then click **Next**.

For static IP users

Check **Use Static IP Address** then key in your IP address, then click **Next**.

*** If your connection type is MER**

For dynamic IP users

Check **Obtain an IP address automatically**, **Obtain default gateway automatically**, and **Obtain DNS server address automatically**, then click **Next**.

For static IP users

Check **Use the following IP Address**, **Use the following default gateway**, and **Use the following DNS server address**, then key in the addresses in the corresponding fields.

*** If your connection type is IPoA**

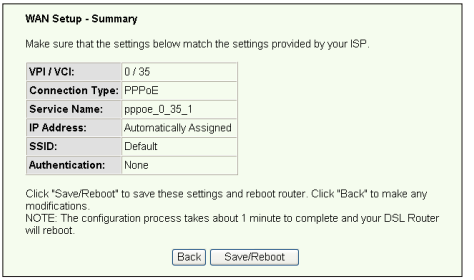
Static IP user only

Key in the WAN IP address assigned by your ISP, then click **Next**.

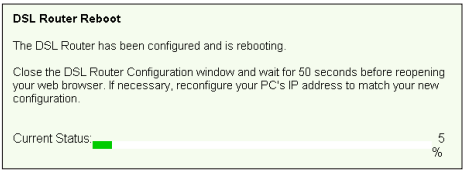
Wireless Setup

1. Designate an SSID (network name) for WL-AM604g. Choose the security level then enter a key. The number of digit of your key depends on the security level you choose. Refer to the note on the web page. When finished, click **Next**.

2. This page provides a summary of WAN and wireless configurations of your WL-AM604g. Click **Save/Reboot** to save and activate your configuration.


WAN Setup - Summary
Make sure that the settings below match the settings provided by your ISP.
VPI / VCI: 0 / 35
Connection Type: PPPoE
Service Name: pppoe_0_35_1
IP Address: Automatically Assigned
SSID: Default
Authentication: None
Click "Save/Reboot" to save these settings and reboot router. Click "Back" to make any modifications.
NOTE: The configuration process takes about 1 minute to complete and your DSL Router will reboot.
Back
Save/Reboot

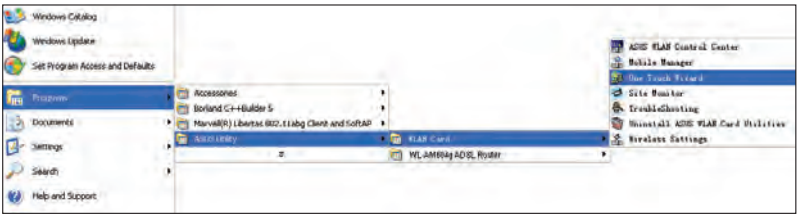
3. WL-AM604g reboots in about 50 seconds. The green bar shows the current rebooting status. After rebooting, the web page automatically refreshes to display the settings.


DSL Router Reboot
The DSL Router has been configured and is rebooting.
Close the DSL Router Configuration window and wait for 50 seconds before reopening your web browser. If necessary, reconfigure your PC's IP address to match your new configuration.
Current Status:
5 %

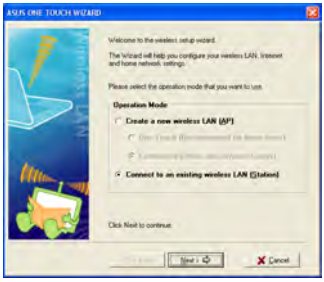
Connecting WL-AM604g with ASUS WLAN Card

Configuring ASUS WLAN Card with One Touch Wizard™

If you have installed ASUS wireless card together with its utilities and drives on your PC, click **Start -> All Programs -> ASUS Utility-> WLAN Card -> One Touch Wizard** to launch the One Touch Wizard utility.



1. Select **Connect to an existing wireless LAN (Station)** radio button and click **Next to continue**.



2. One Touch Wizard searches and displays the available APs in the **Available Networks** list. Select WL-AM604g and press **Next** to continue.

3. Set the authentication and encryption of your WLAN card the same with those at WL-AM604g. Click **Next** to continue.

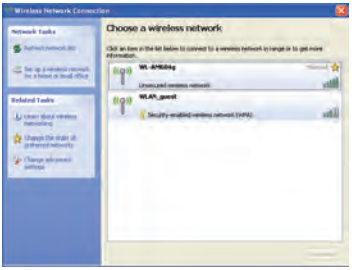
4. It takes several seconds for the wireless card to associate with WL-AM604g. Press **Next** to set up the TCP/IP.

5. Set up the IP address of the WLAN Card based to your network environment. After the setup is completed, click **Finish** to exit the **One Touch Wizard**.

Configuring WLAN card with Windows® WZC service

You can also use Windows® Wireless Zero Configuration service to set up the wireless connection with WL-AM604g.

1. Double-click the wireless network icon on the task bar to view available networks. Select your wireless router and click **Connect**.



2. Enter the key you have set on the WL-AM604g and click **Connect**. The connection is completed within several seconds.

Wireless settings

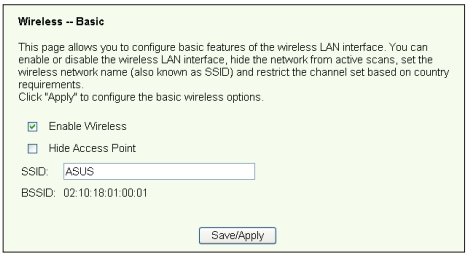
This chapter describes how to configure the wireless features of your ASUS WL-AM604g 11g ADSL Wireless Router.

Setting up an SSID

Service Set Identifier (SSID) is also known as the name of a wireless network. To connect a wireless router, or to form a wireless bridge system, all wireless routers or APs or clients must have the same SSID.

To set up an SSID:

1. Click **Wireless -> Basic** in the navigation menu to open the configuration page.


Wireless -- Basic
This page allows you to configure basic features of the wireless LAN interface. You can enable or disable the wireless LAN interface, hide the network from active scans, set the wireless network name (also known as SSID) and restrict the channel set based on country requirements.
Click "Apply" to configure the basic wireless options.
Enable Wireless
Hide Access Point
SSID: ASUS
BSSID: 02:10:18:01:00:01
Save/Apply

2. Select **Enable Wireless** checkbox.

   If you want to hide your WL-AM604g from wireless scanning, select **Hide Access Point**. But if the wireless clients have the correct SSID, they can still connect to your WL-AM604g.

3. Define the SSID for your WL-AM604g. The default SSID is **Default**.
4. Press **Save/Apply** to save and activate the settings.

Setting up a wireless security

To protect your wireless network, you need to set up a security mechanism at both WL-AM604g and the wireless clients.

Network authentication

Network authentication uses certain types of mechanism to identify authenticated wireless clients. WL-AM604g supports the following authentication methods:

Open: This option disables authentication protection for your wireless network. Under the Open mode, any IEEE802.11b/g wireless client can connect to your wireless network.

Shared: This means using the same WEP keys for authentication and encryption.

802.1X: 802.1X uses RADIUS (Remote Access Dial-Up User Service) server to authenticate wireless clients with a username and password. It can authenticate users with different levels of access rights.

WPA/WPA2: WPA stands for WiFi-Protected Access. WPA provides two security modes for Home/SOHO user and enterprise network. The former solution adopts Pre-Shared Key for authentication, and the latter uses the existing 802.1X RADIUS server in the enterprise network to process the authentication requests.

WPA - PSK/WPA2-PSK:

WPA-PSK (Pre-Shared Key) is the solution for home and SOHO users who have no 802.11X authentication server within the LAN. To set up WPA-PSK, you need to key in a passphrase and let the system generate the key. Combination of letters, numbers and non-alphanumeric characters is recommended for ensuring security.

Encryption

Encryption is used to convert plain text data into unreadable codes with certain type of algorithm before capsulation for wireless transmission. WL-AM604g supports the following encryption methods:

WEP: WEP stands for Wired Equivalent Privacy. It uses 64 or 128-bit static keys. Key in a passphrase to let the system generate the WEP keys.

TKIP: Temporal Key Integrity Protocol (TKIP) dynamically generates unique keys to encrypt every data packet in a wireless session.

AES: Advanced Encryption Standard (AES) is a dependable encryption adopted in WPA2 or IEEE802.11i standard. It offers stronger protection and greatly increases the complexity of wireless encryption.

TKIP + AES: For a network where WPA clients (using TKIP encryption) and WPA2 clients (using AES encryption) co-exist. Select this option to enable both.

How to setup wireless security

Open

1. Click **Wireless -> Security** in the navigation menu to open the configuration page.

Wireless -- Security
This page allows you to configure security features of the wireless LAN interface. You can sets the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength.
Click "Save/Apply" to configure the wireless security options.
Network Authentication:
Open
WEP Encryption:
Disabled
Save/Apply

3. Select **Enable** in the **WEP Encryption** field to use WEP keys for data encryptions. Select 64-bit or 128-bit **Encryption Strength** for key length then click **Set Encryption Keys** button to set up the keys. If you do not want to encrypt data, select **Disable** in **WEP Encryption** and skip to Step 5.
4. After clicking the **Set Encryption Keys** button, you are directed to another page to set up the keys. To obtain system-generated keys, select **Enable ASUS PassPhrase** and key in a passphrase, and the system automatically generates four network keys for you. You can also disable ASUS Passphrase and enter four keys manually. Take note of the passphrase (if any) and keys.

Wireless Settings -- Encryption Keys
Enable ASUS PassPhrase
Key in any word in Passphrase, then WL-AM604g will generate the correct network keys.
Passphrase:
Network Key 1:
Network Key 2:
Network Key 3:
Network Key 4:
Current Network Key: 1
Save/Apply

5. Press **Save/Apply** to save and activate the settings.

Shared

1. Click **Wireless -> Security** in the navigation menu to open the configuration page.
2. Select **Shared** in the **Network Authentication** field to use WEP authentication.

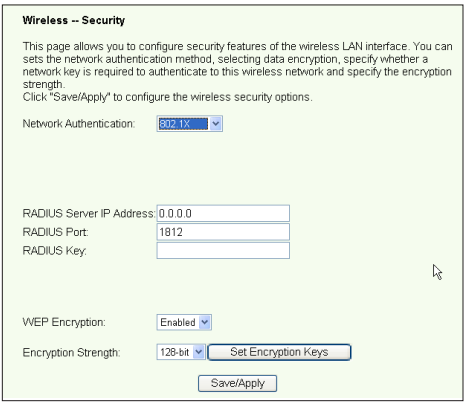
Wireless -- Security
This page allows you to configure security features of the wireless LAN interface. You can sets the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength.
Click "Save/Apply" to configure the wireless security options.
Network Authentication: Shared
WEP Encryption: Enabled
Encryption Strength: 128-bit
Set Encryption Keys
Save/Apply

Shared mode use the same WEP keys for both encryption and authentication. Hence, the WEP Encryption is fixed to **Enabled**

3. Select 64-bit or 128-bit **Encryption Strength** for key length then click **Set Encryption Keys** button to set up the keys. Refer to **Open** mode Step 4 for key configuration.
4. Press **Save/Apply** to save and activate the settings.

802.1X

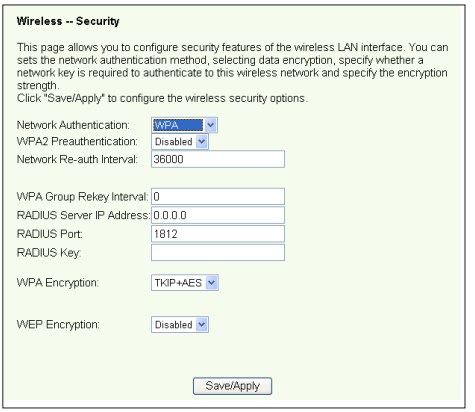
1. Click **Wireless -> Security** in the navigation menu to open the configuration page.
2. Select **802.1X** in the **Network Authentication** field to enable authentication using RADIUS server in your network.


Wireless -- Security
This page allows you to configure security features of the wireless LAN interface. You can sets the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength.
Click "Save/Apply" to configure the wireless security options.
Network Authentication:
802.1X
RADIUS Server IP Address:
0.0.0.0
RADIUS Port:
1812
RADIUS Key:
WEP Encryption:
Enabled
Encryption Strength:
128-bit
Set Encryption Keys
Save/Apply

3. Key in the **RADIUS Server IP address**, **RADIUS port** (the default value is 1812), and **RADIUS Key.**
4. You can choose to enable or disable data encryption. If you want to encrypt data, select **Enable** in the **WEP Encryption field**, select 64-bit or 128-bit **Encryption Strength** for key length. Click **Set Encryptioin Keys** button to set up the keys.
5. Refer to **Open** mode Step 4 for key configuration.
6. Press **Save/Apply** to save and activate the settings.

WPA/WPA2

1. Click **Wireless -> Security** in the navigation menu to open the configuration page.
2. Select **WPA/WPA2** in the **Network Authentication** field to enable RADIUS server authentication and advanced encryption methods.


Wireless -- Security
This page allows you to configure security features of the wireless LAN interface. You can sets the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength.
Click "Save/Apply" to configure the wireless security options.
Network Authentication:
WPA
WPA2 Preauthentication:
Disabled
Network Re-auth Interval:
36000
WPA Group Rekey Interval:
0
RADIUS Server IP Address:
0.0.0.0
RADIUS Port:
1812
RADIUS Key:
WPA Encryption:
TKIP+AES
WEP Encryption:
Disabled
Save/Apply

3. Set the **WPA2 Preauthentication** to **Enabled** if you want to use this function.
4. By default, the **Network Re-auth Interval** is 36000 seconds. Set up this value based on your network environment.
5. To set up RADIUS server information, key in the **WPA Group Rekey Interval**, **RADIUS server IP address**, **RADIUS port**, and **RADIUS Key**.
6. Set up the WPA encryption methods. If there are only WPA2 clients within your network, select AES, if WPA clients only, select TKIP. If both exist, select TKIP+AES.
7. You can also enable WEP client to access your wireless network. To enable WEP clients, set **WEP Encryption** to **Enabled**. Select 64-bit or 128-bit **Encryption Strength** for key length then click **Set Encryptioin Keys** button to set up the keys. Refer to **Open** mode Step 4 for key configuration.
8. Press **Save/Apply** to save and activate the settings.

WPA-PSK/WPA2-PSK

1. Click **Wireless -> Security** in the navigation menu to open the configuration page.
2. Select **WPA-PSK/WPA2-PSK** in the **Network Authentication** field.

3. Key in the WPA Pre-Shared Key. The key is masked by the system. To check the key, press **Save/Apply** and wait until the page refreshes. Then click **Click here to display** link, you can see the key displayed in a separate window.
4. Set up the **WPA Group Rekey Interval**.
5. Set up the WPA encryption methods. If there are only WPA2 clients within your network, select AES, if WPA clients only, select TKIP. If both exist, select TKIP+AES.
6. You can also enable WEP client to access your wireless network. To enable WEP clients, set **WEP Encryption** to **Enabled**. Select 64-bit or 128-bit **Encryption Strength** for key length then click **Set Encryption Keys** button to set up the keys. Refer to **Open** mode Step 4 for key configuration.
7. Press **Save/Apply** to save and activate the settings.

MAC filter

You can set up MAC filters to allow or deny wireless clients with known MAC addresses. To set up MAC filter:

1. Click **Wireless -> MAC Filter** in the left side menu to open the configuration page.
2. Select the restriction mode for the filter: select **Allow** to allow the client and deny the rest; select **Deny** to deny the client and allow the rest. By default, the filter is set to **Disable** which allows all clients. Click **Add** to create a filter.

2. Type the MAC address of the wireless client you want to allow or block.
3. Press **Save/Apply** to save and activate the settings.

Wireless bridge

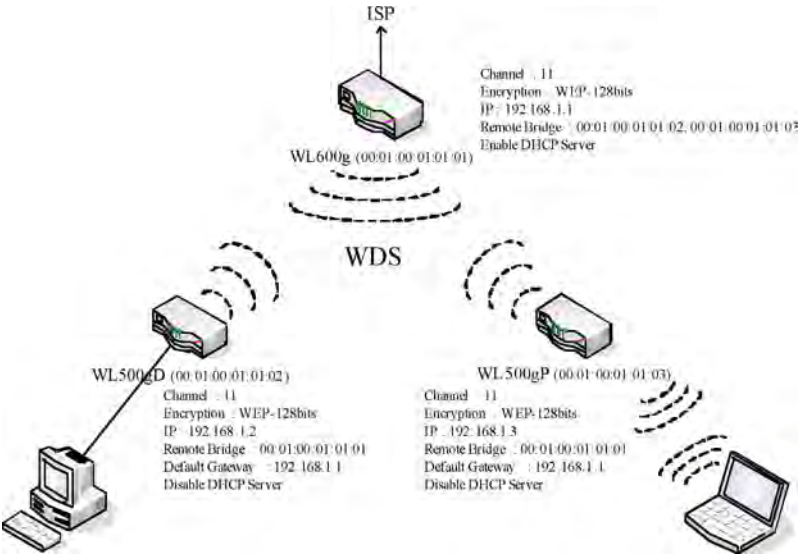
You can connect WL-AM604g to other wireless bridges so as to expand your wireless LAN. This function is also refer to as the Wireless Distribution System (WDS).

To set up WDS, the wireless routers must meet the following requirements:

1. Using the same encryption.
2. Working on the same channel.
3. The IP addresses of all wireless bridges are within the same subnet.
4. WDS enabled.
5. For bridging wireless routers, the MAC Addresses of the uplink wireless router must be saved to the **Remote Bridge List**. For uplink wireless router, MAC addresses of all bridging router must be saved.

Example: WL-AM604g(wireless bridge with Internet access), WL-500gP (wireless bridge), and WL-500gD (wireless bridge). Refer to the illustration on the next page.

	WL-AM604g	WL-500gD	WL-500gP
SSID	ASUS	ASUS	ASUS
DHCP server	Enabled	Disabled	Disabled
LAN IP address	192.168.1.1	192.168.1.2	192.168.1.3
Authentication	Open	Open	Open
Encryption	WEP-128bit	WEP-128bit	WEP-128bit
Remote bridge	00:01:00:01:01:02 00:01:00:01:01:03	00:01:00:01:01:01	00:01:00:01:01:01
MAC address	00:01:00:01:01:01	00:01:00:01:01:02	00:01:00:01:01:03
Channel	11	11	11

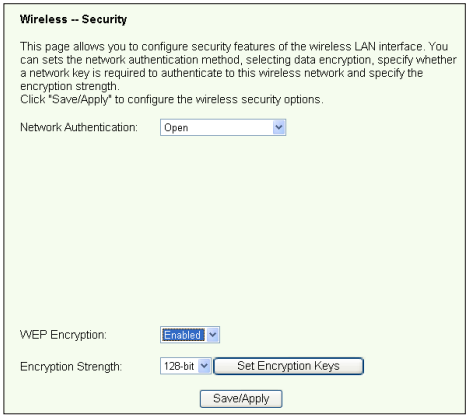


WDS setup (WL-AM604g)

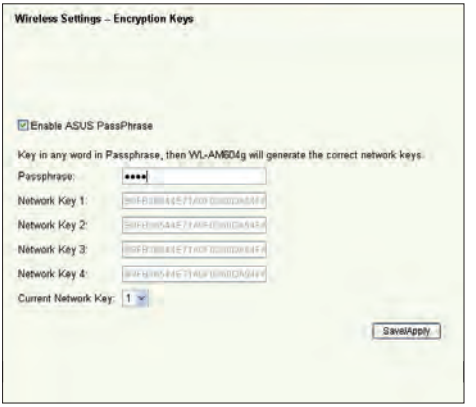
1. Setting up encryption

If you want to use the encryption function, select a **Network Authentication** mode. If not, select **Disabled**. Click **Wireless -> Security** to open the configuration page.

In this example, set authentication to **Open** and encryption to **Enabled,** select **128bit** for Encryption Strength, then click **Set Encryption Keys**.

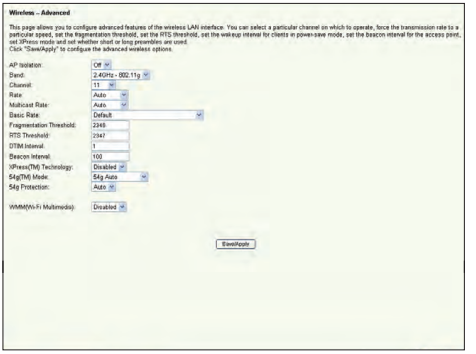

Wireless -- Security
This page allows you to configure security features of the wireless LAN interface. You can sets the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength.
Click "Save/Apply" to configure the wireless security options.
Network Authentication:
Open
WEP Encryption:
Enabled
Encryption Strength:
128-bit
Set Encryption Keys
Save/Apply

You can check **Enable ASUS PassPhrase** and key in a string in the **Passphrase** field to let the system generate the Network Keys. You can also disable Passphrase and enter four keys manually. When finished, click **Save/Apply**.


Wireless Settings – Encryption Keys
Enable ASUS PassPhrase
Key in any word in Passphrase, then WL-AM604g will generate the correct network keys.
Passphrase:
Network Key 1:
Network Key 2:
Network Key 3:
Network Key 4:
Current Network Key: 1
Save/Apply

2. Setting up channel

Click **Wireless -> Advanced**. Set **Channel** to **11** and click **Save/Apply**.

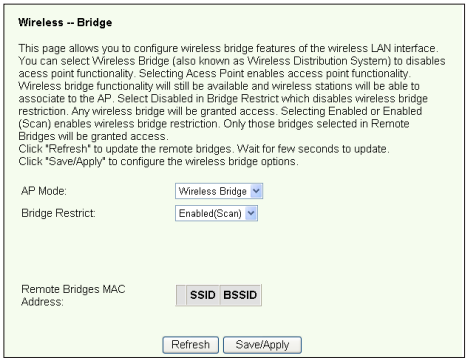


3. Setting IP address

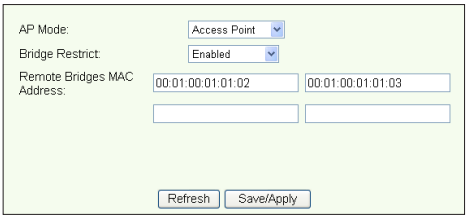
Click **Advanced Setup -> LAN**. Set the WL-AM604g **IP address** to **192.168.1.1**, select **Enable DHCP Server**, and set **Start IP address** to **192.168.1.4**. Click S**ave/ Reboot**.

4. Setting WDS

Click **Wireless -> Wireless Bridge**. Select **Wireless Bridge.** You can select **Enabled(Scan)** to find WL-500gD and WL-500gP. If the stations are on the list, check the checkbox and click **Save/Apply**.


Wireless -- Bridge
This page allows you to configure wireless bridge features of the wireless LAN interface. You can select Wireless Bridge (also known as Wireless Distribution System) to disables acess point functionality. Selecting Acess Point enables access point functionality. Wireless bridge functionality will still be available and wireless stations will be able to associate to the AP. Select Disabled in Bridge Restrict which disables wireless bridge restriction. Any wireless bridge will be granted access. Selecting Enabled or Enabled (Scan) enables wireless bridge restriction. Only those bridges selected in Remote Bridges will be granted access.
Click "Refresh" to update the remote bridges. Wait for few seconds to update.
Click "Save/Apply" to configure the wireless bridge options.
AP Mode:
Wireless Bridge
Bridge Restrict:
Enabled(Scan)
Remote Bridges MAC Address:
SSID
BSSID
Refresh
Save/Apply

If you cannot find WL-500gD by scanning, set **Bridge Restrict** to **Enable** and key in the MAC address of WL-500gD and WL-500gP manually. When finished, click **Save/Apply**. WL-AM604g WDS setup is complete!



WDS setup (WL-500gD and WL-500gP)

Refer to the table on page 22 to set up WL-500gD and WL-500gP.

1. Wireless Setting

   Assign the same wireless channel, authentication, encryption, and keys to WL-500gD and WL-500gP as that in WL-AM604g.
2. Set IP address to 192.168.1.2 (WL-500gD), 192.168.1.3 (WL-500gP)
3. Disable DHCP Server and set default gateway to 192.168.1.1,
4. WDS Setting

   • Open **Wireless -> Bridge**, set AP Mode to **Hybrid**.

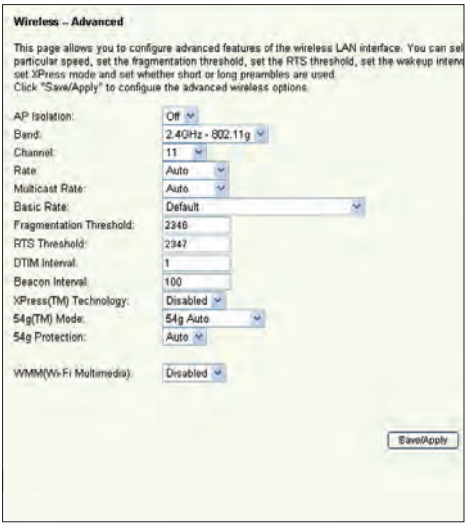
   • Set **Channel** to **11**.

   • Add the MAC address of WL-AM604g to **Remote Bridge List**.
5. Save the settings and reboot.

Wireless advanced settings

Click **Wireless -> Advanced** to configure the advanced features of the wireless router such as communication channel, data rate, and WMM.

If you do not know these items, use the default setting.


Wireless -- Advanced
This page allows you to configure advanced features of the wireless LAN interface. You can sel
particular speed, set the fragmentation threshold, set the RTS threshold, set the wakeup interv
set XPress mode and set whether short or long preambles are used.
Click "Save/Apply" to configure the advanced wireless options.
AP Isolation: Off
Band: 2.4GHz - 802.11g
Channel: 11
Rate: Auto
Multicast Rate: Auto
Basic Rate: Default
Fragmentation Threshold: 2346
RTS Threshold: 2347
DTIM Interval: 1
Beacon Interval: 100
XPress(TM) Technology: Disabled
54g(TM) Mode: 54g Auto
54g Protection: Auto
WMM(Wi-Fi Multimedia): Disabled
Save/Apply

Network security

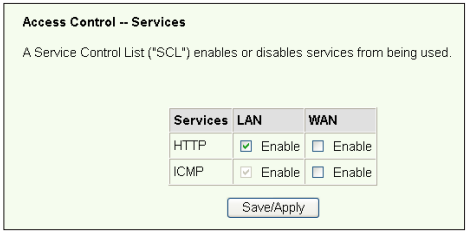
This chapter shows how to set up security defence for your local area network.

Setting up the access rights to WL-AM604g

To protect your wired and wireless LAN, we recommend setting up access protection so as to prevent WL-AM604g from being viewed or modified by unauthenticated users.

Service restriction

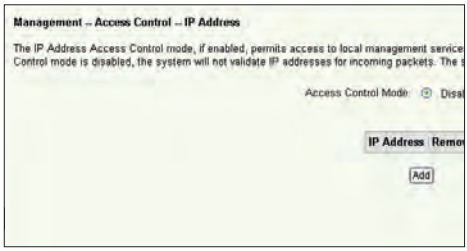
WL-AM604g provides a Service Control List (SCL) that can enable or disable services which are used to access the router configuration interface. You can choose allowing HTTP, ICMP from WAN, or allowing HTTP from LAN. After the configuration is completed, click **Save/Apply** to activate the settings.



IP address restriction

To protect the router from being accessed by unauthenticated user in your LAN, you can restrict the access right to the hosts with certain IP addresses. Click **Management -> Access Control -> IP Addresses** to set up the IP address for the authenticated network supervisors.

Before setting up the IP address restriction, ensure that the addresses of authenticated hosts are static.


Management -- Access Control -- IP Address
The IP Address Access Control mode, if enabled, permits access to local management service
Control mode is disabled, the system will not validate IP addresses for incoming packets. The
Access Control Mode:
IP Address
Add

Advanced settings

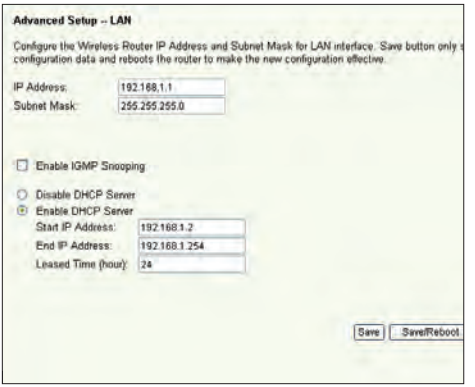
This chapter shows how to configure other advanced router features of WL-AM604g.

WAN

Click **Advanced Setup -> WAN** in the navigation menu to enter the WAN setup page. This page allows you to edit the WAN settings.

LAN

1. Click **Advanced Setup -> LAN** in the navigation menu to enter the **Local Area Network (LAN) Setup** page. This page allows to change the IP address and subnet mask of the router, enables or disables UPnP, IGMP snooping, and DHCP server.



The default settings are:

- **IP Address:** 192.168.1.1
- **Subnet mask:** 255.255.255.0
- **Enable UPnP:** Yes
- **Enable IGMP Snooping:** No
- **Enable DHCP Server:** Yes

  Start IP Address: 192.168.1.2
  End IP Address: 192.168.1.254
  Lease Time (hour): 24

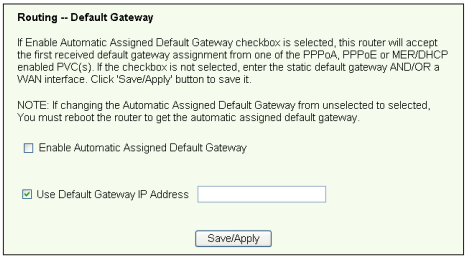
By default, DHCP server is enabled. The DHCP server enables you to assign the addresses for to the LAN computers.

2. Press **Save** to save the configurations and go on setting up the other features. If all settings are complete, press **Save/ Reboot** to apply the settings and reboot WL-AM604g.

Setting up the default gateway

This section allows you to manually set up the default gateway of Internet connection.

1. Click **Advanced Setup -> Routing -> Default Gateway** to open the configuration page.

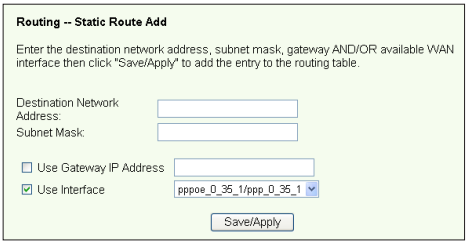

Routing -- Default Gateway
If Enable Automatic Assigned Default Gateway checkbox is selected, this router will accept the first received default gateway assignment from one of the PPPoA, PPPoE or MER/DHCP enabled PVC(s). If the checkbox is not selected, enter the static default gateway AND/OR a WAN interface. Click 'Save/Apply' button to save it.
NOTE: If changing the Automatic Assigned Default Gateway from unselected to selected, You must reboot the router to get the automatic assigned default gateway.
Enable Automatic Assigned Default Gateway
Use Default Gateway IP Address
Save/Apply

2. By default, automatic assigned default gateway is enabled, that is, the router accepts the first received gateway assignment from ISP. If your ISP specifies a gateway, uncheck **Enable Automatic Assigned Default Gateway** and enter the gateway address.
3. Press **Save/Apply** to save and activate the settings.

Setting up the static route

For simple networks with only one router, you do not need to set up the static route. For more complicated network such as an enterprise network where several routers and different subnets exist, you need to configure static routes so as to direct the network traffic correctly.

1. Click **Advanced Setup -> Routing -> Static Route** to open the configuration page and view the current static route settings. Press **Add** to create a new static route.


Routing -- Static Route Add
Enter the destination network address, subnet mask, gateway AND/OR available WAN interface then click "Save/Apply" to add the entry to the routing table.
Destination Network Address:
Subnet Mask:
Use Gateway IP Address
Use Interface
pppoe_0_35_1/ppp_0_35_1
Save/Apply

2. The configurable settings include:
   - **Destination Network:** Key in the destination IP address.
   - **Subnet Mask:** Key in the destination subnet mask.
   - **Use Gateway IP Address:** Key in the gateway network address (optional).
   - **User Interface:** Select the interface of your router to which the static route applies.
3. Press **Save/Apply** to save and activate the settings.

Setting up mapping groups

Port Mapping enables you to create mapping groups with appropriate LAN and WAN interfaces.

To set up a mapping group:

1. Click **Advanced Setup -> Port Mapping** to open the configuration page.

Port Mapping -- A maximum 16 entries can be configured
Port Mapping supports multiple ports to PVC and bridging groups. Each group will perform as an independent network. To support this feature, you must create mapping groups with appropriate LAN and WAN interfaces using the Add button. The Remove button will remove the grouping and add the ungrouped interfaces to the Default group.
Enable virtual ports on
Group Name
Interfaces
Remove
Edit
Default
Add
Remove

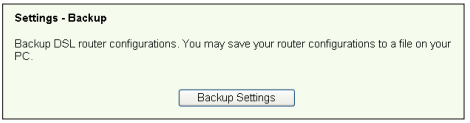
2. Click the **Add** button and enter the appropriate information. The new group is displayed on the list.

Management

This chapter describes how to maintain your WL-AM604g wireless ADSL router.

Configuration backup

You can backup the configuration file and store it on your computer. Click **Management -> Settings** to open the configuration page and click the **Backup Settings** button. Click **Save** and define the destination folder. The default name for backup file is **backupsettings.conf**.


Settings - Backup
Backup DSL router configurations. You may save your router configurations to a file on your PC.
Backup Settings

Restore settings from a backup file

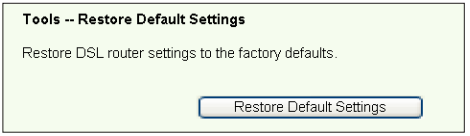
You can restore the settings from a backup file when you reset the wireless router to factory default. Click **Management -> Settings -> Update** to open the configuration page. Click **Browse...** to locate the backup file on your computer, then click **Update Settings** button to proceed. When restoring is completed, the wireless router reboots. The whole process takes about 80 seconds.

Tools -- Update Settings
Update DSL router settings. You may update your router settings using your saved files.
Settings File Name:
浏览...
Update Settings

Restore to factory default settings

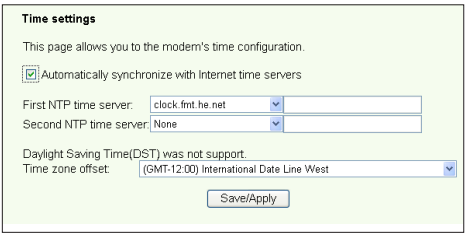
To clear all settings and restore to the factory default settings, do either of the following:

- Press the **Reset** button on the rear panel of the wireless router for ten seconds.
- Click **Management -> Settings -> Restore Default** to open the configuration page and click the **Restore Default Settings** button.



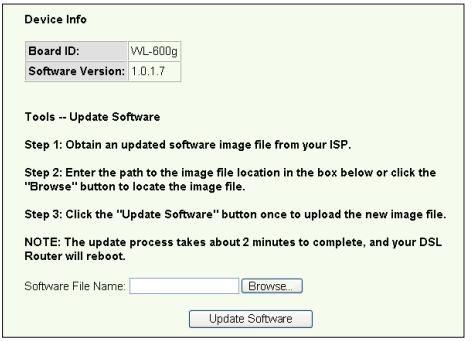
Setting up the time server

You can configure the time setting so that WL-AM604g can always synchronize with a time server from the Internet. Click **Management -> Time settings** and check **Automatically synchronize with International servers**. Select a time server from the drop-down list and set your time zone. When finished, click **Save/Apply**.



Firmware update

To update the firmware, click M**anagement -> Update Software**. Click **Browse...** to locate the firmware file, then click **Update Software** button to start uploading the firmware. The update process takes about two minutes.


Device Info
Board ID:
WL-600g
Software Version:
1.0.1.7
Tools -- Update Software
Step 1: Obtain an updated software image file from your ISP.
Step 2: Enter the path to the image file location in the box below or click the "Browse" button to locate the image file.
Step 3: Click the "Update Software" button once to upload the new image file.
NOTE: The update process takes about 2 minutes to complete, and your DSL Router will reboot.
Software File Name:
Browse...
Update Software